WHAT IS CLAIMED IS:

1. A method for selecting compounds capable of modulating an interaction between a first test agent and a second test agent, comprising:

providing a first fusion construct and a second fusion construct, said first fusion construct having an N-intein and said first test agent, said second fusion construct having a C-intein and said second test agent, wherein at least one of the two fusion constructs has an inactive reporter capable of being converted to an active reporter upon trans-splicing through said N-intein and said C-intein;

allowing said first test agent in said first fusion construct to interact with said second test agent in said second fusion construct in the presence of one or more test compounds; and

detecting said active reporter.

2. The method of Claim 1, wherein said first fusion construct comprises a first inactive reporter fused to the N-terminus of said N-intein, and said second fusion construct comprises a second inactive reporter fused to the C-terminus of said C-intein, and wherein said active reporter is formed upon ligation of said first and second inactive reporters.

3. The method of Claim 2, wherein said inactive reporter is a non-proteinaceous moiety fused to the N-terminus of said N-intein through an amino acid linker.

4. The method of Claim 2, wherein said second inactive reporter is a non-proteinaceous moiety fused to the C-terminus of said C-intein through an amino acid linker selected from the group consisting of cysteine, serine, and threonine.

5. The method of Claim 2, wherein said second inactive reporter is a polypeptide having an N-terminus amino acid selected from the group consisting of cysteine, serine, and threonine.

6. The method of Claim 1, wherein the first and second fusion constructs are allowed to interact with each other in a substantially cell free environment.

7. The method of Claim 1, wherein said active reporter is detected based on molecular weight.

8. The method of Claim 1, wherein said active reporter is detected by a color assay.

9. The method of Claim 1, wherein said active reporter is detected by an affinity assay.

10. The method of Claim 1, further comprising:

allowing said first test agent in said first fusion construct to interact with said second test agent in said second fusion construct in the absence of said compound;

detecting said active reporter; and

comparing the level of said active reporter determined in the presence and absence of said compound.

11. A method for selecting compounds capable of interfering with an interaction between a first test polypeptide and a second test polypeptide comprising:

introducing into a host cell a first chimeric gene and a second chimeric gene, said first chimeric gene encoding a first fusion protein having said first test polypeptide, an N-intein, and a first inactive reporter polypeptide fused to the N-terminus of an N-intein, said second chimeric gene encoding a second fusion protein having said second test polypeptide, a C-intein, and a second inactive reporter polypeptide fused to the C-terminus of said C-intein, wherein ligation between the C-terminus of said first inactive reporter polypeptide and the N-terminus of said second inactive reporter polypeptide forms an active reporter protein;

expressing said first fusion protein and said second fusion protein in said host cell in the presence of one or more test compounds; and

determining the production of said active reporter protein, wherein the inhibition of the production of said active reporter protein would indicate that at least one of said one or more test compounds is capable of interfering with the interaction between said first test polypeptide and said second test polypeptide.

12. The method of Claim 11, wherein said active reporter protein is a counterselectable reporter.

13. The method of Claim 12, wherein said active reporter protein is a protein that directly or indirectly inhibits the host cell growth.

14. The method of Claim 11, wherein said first inactive reporter polypeptide is an N-terminal fragment of said active reporter protein and said second inactive reporter polypeptide is the remaining C-terminal fragment of said active reporter protein.

15. The method of Claim 11, wherein said host cell is an yeast cell.

16. The method of Claim 15, wherein said yeast cell is a diploid cell and said step of introducing into said host cell said first chimeric gene and said second chimeric gene comprises mating a first haploid yeast cell having said first chimeric gene with a second haploid yeast cell having said second chimeric gene.

17. The method of Claim 11, wherein said first test polypeptide is fused to the C-terminus of said N-intein in said first fusion protein, and said second test polypeptide is fused to the N-terminus of said C-intein in said second fusion protein.

18. The method of Claim 11, wherein said first test polypeptide is fused to the N-terminus of said first inactive reporter polypeptide in said first fusion protein, and said

second test polypeptide is fused to the N-terminus of said C-intein in said second fusion protein.

19. The method of Claim 11, wherein said first test polypeptide is fused to the C-terminus of said N-intein in said first fusion protein, and said second test polypeptide is fused to the C-terminus of said second inactive reporter polypeptide in said second fusion protein.

20. The method of Claim 11, wherein said first test polypeptide is fused to the N-terminus of said first inactive reporter polypeptide in said first fusion protein, and said second test polypeptide is fused to the C-terminus of said second inactive reporter polypeptide in said second fusion protein.

21. The method of Claim 11, wherein said active reporter protein is a transcription suppressor and said host cell further comprises a detectable gene that is suppressed only when said transcription suppressor is present.

22. The method of Claim 11, further comprising expressing a third test polypeptide in said host cell, wherein the interaction between said first and second test polypeptide requires the presence of said third test polypeptide.

23. The method of Claim 22, wherein said third test polypeptide modifies post-translationally at least one of said first and second test polypeptides.

24. A method for selecting compounds capable of interfering with an interaction between a first test polypeptide and a second test polypeptide comprising:

introducing into a first yeast haploid cell a first chimeric gene encoding a first fusion protein having said first test polypeptide, an N-intein, and a first inactive reporter polypeptide fused to the N-terminus of an N-intein;

introducing a second chimeric gene into a second yeast haploid cell of a mating type opposite to that of said first yeast haploid cell, said second chimeric gene encoding a

second fusion protein having said second test polypeptide, a C-intein, and a second inactive reporter polypeptide fused to the C-terminus of said C-intein, wherein ligation between the C-terminus of said first inactive reporter polypeptide and the N-terminus of said second inactive reporter polypeptide forms an active reporter protein that is counterselectable;

mating said first and second yeast haploid cells to form a yeast diploid cell and expressing said first fusion protein and said second fusion protein in said yeast diploid cell in the presence of one or more test compounds; and

determining the production of said active reporter protein, wherein the inhibition of the production of said active reporter protein would indicate that at least one of said one or more test compounds is capable of interfering with the interaction between said first test polypeptide and said second test polypeptide.

25. The method of Claim 24, wherein said active reporter protein is a toxin that inhibits the growth of said yeast diploid cell, and the production of said toxin is determined by detecting the growth of said yeast diploid cell.

26. The method of Claim 24, wherein said active reporter protein is a orotidine-5'-decarboxylase encoded by *URA3* gene and said expressing and determining steps are conducted while said yeast diploid cell is cultured in a medium containing 5-FOA.